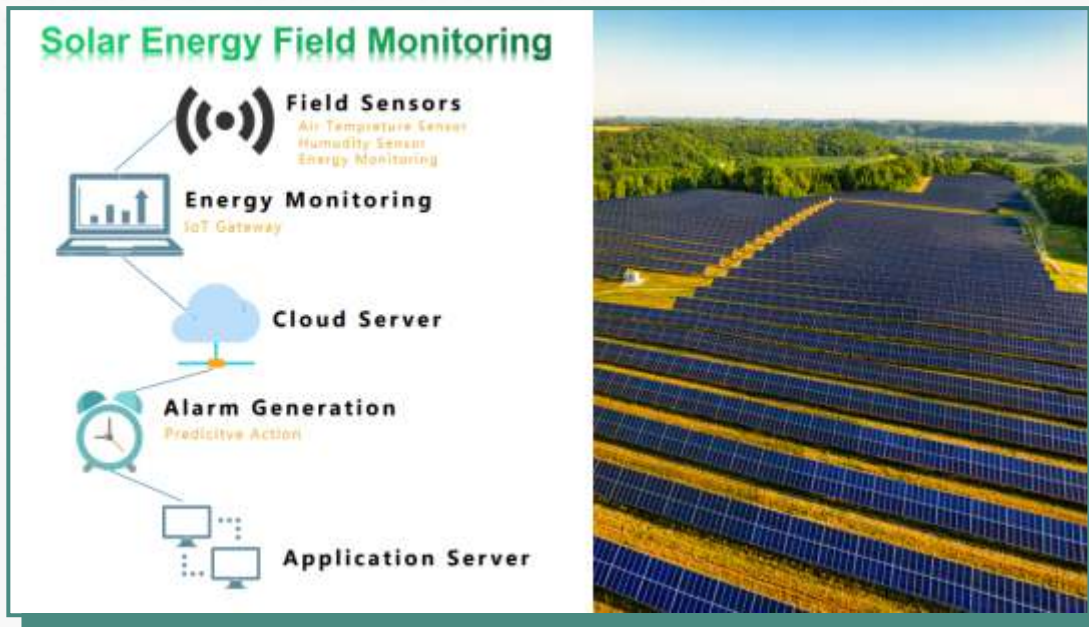


SOLAR PLANT MONITORING SOFTWARE



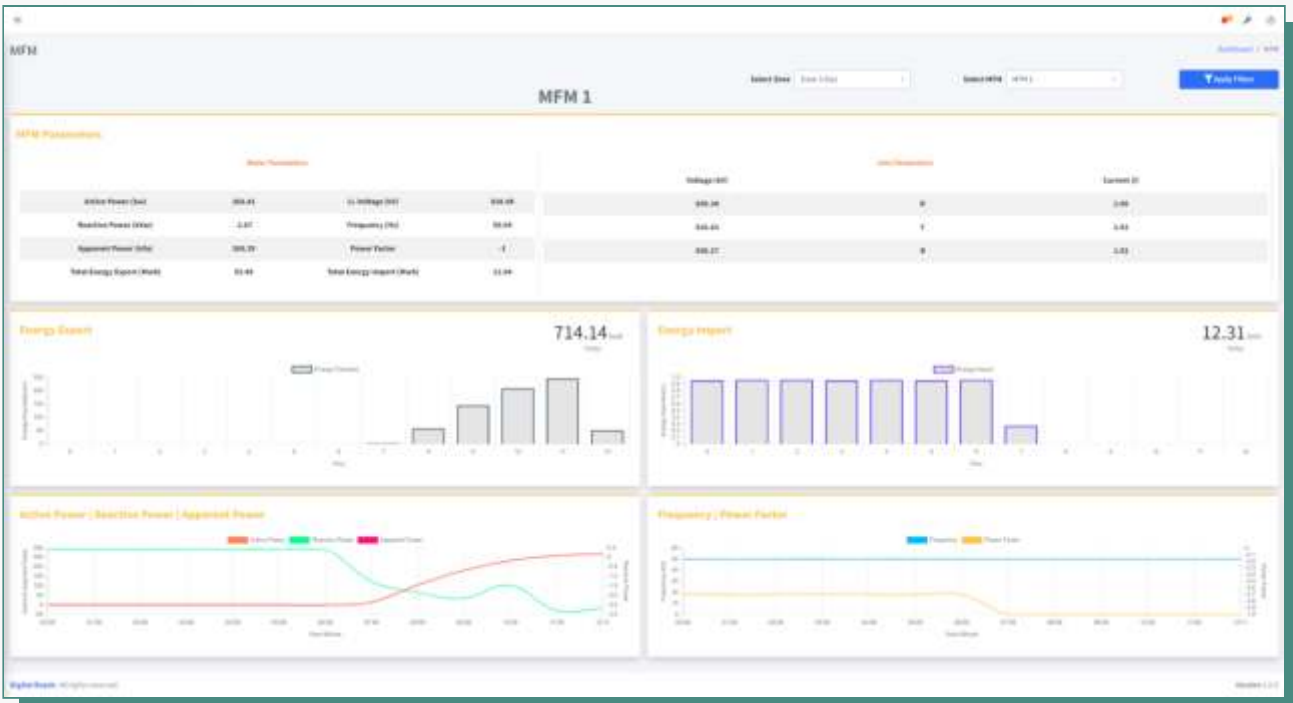
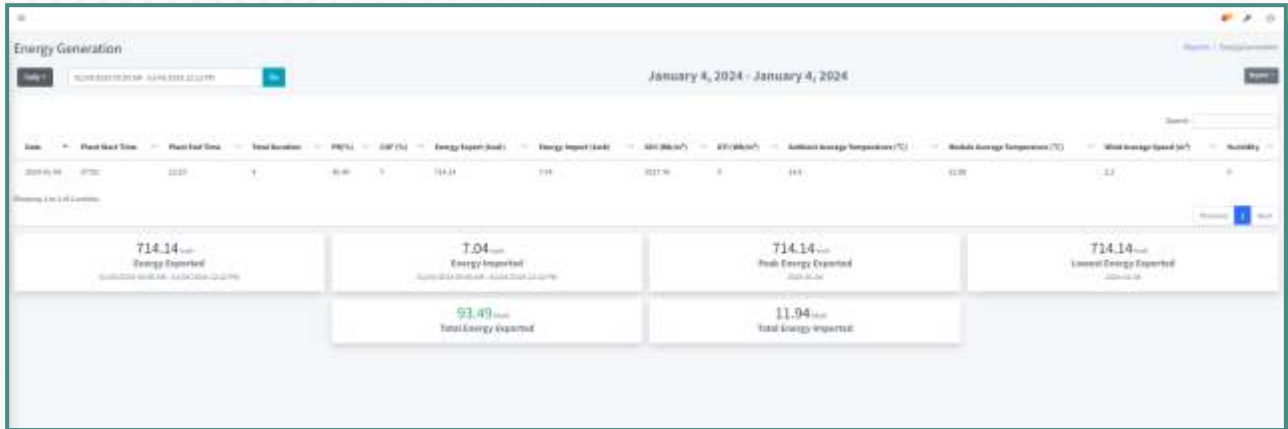
A monitoring system is an essential part of a PV plant. A monitoring system allows the yield of the plant to be monitored and compared with theoretical calculations and raise warnings on a daily basis if there is a performance shortfall. Faults can therefore be detected and rectified before they have an appreciable effect on production. Without a reliable monitoring system it can take many months for a poorly performing plant to be identified. This can lead to unnecessary revenue loss. The key to a reliable monitoring and fault detection methodology is to have good simultaneous measurements of the environmental conditions and plant power output.

In large-scale solar PV power plants, voltage and current will typically be monitored at the inverter. Monitoring at the inverter level is the least complex system to install.



SOLAR PLANT MONITORING SOFTWARE

DASHBOARD



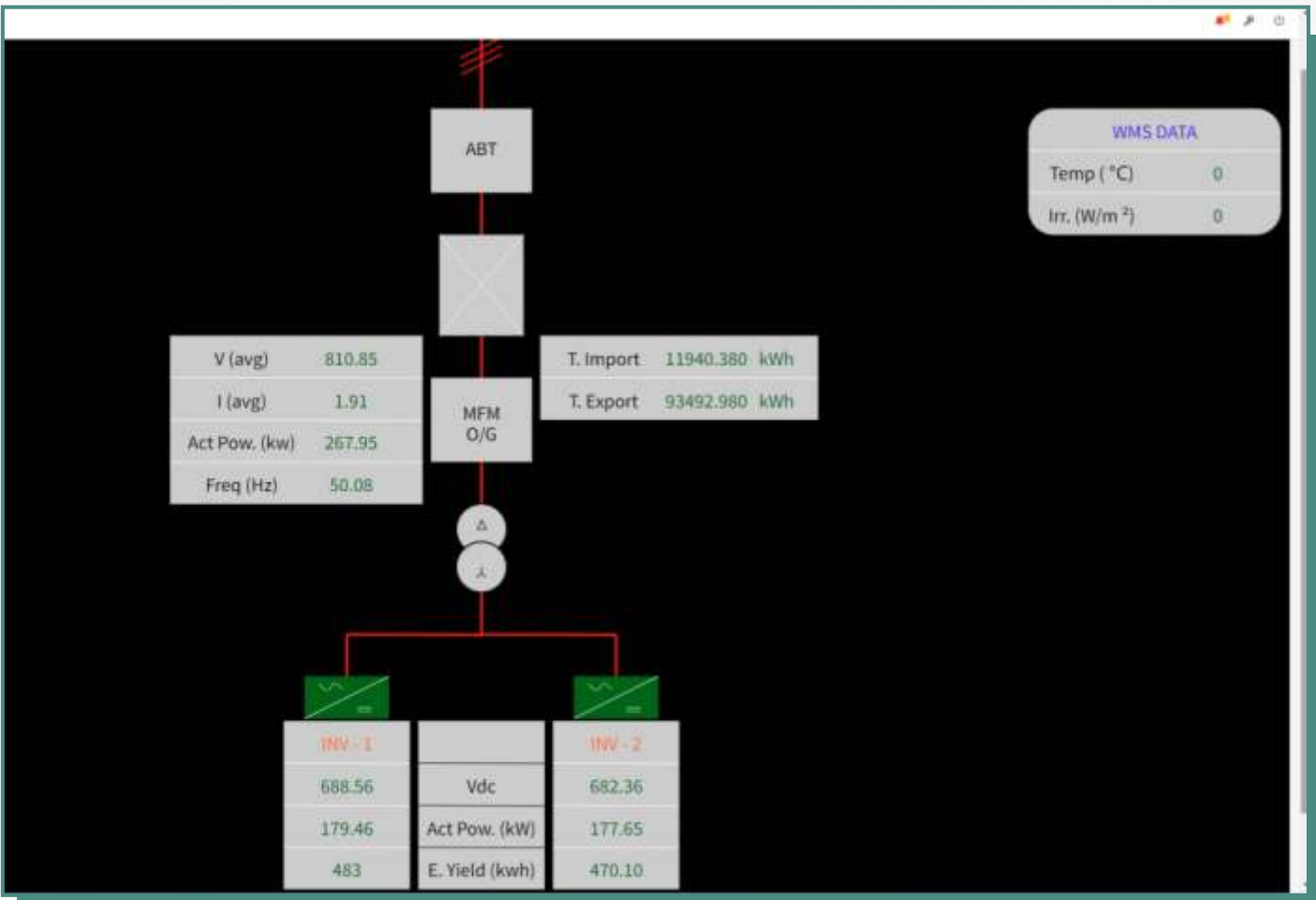
ZONE-WISE GENERATION MONITORING

MFM Parameter Report
MFM 1 | January 4, 2024 12:00 AM - January 4, 2024 12:13 PM

Time	V Voltage (kV)	Reactive Current (A)	Phase Voltage (V)	Phase Voltage (V)	Phase Voltage (V)	Phase T Current (A)	Phase B Current (A)	Phase C Current (A)	Power Factor (Constant)	Frequency (Hz)	Active Power (kW)	Reactive Power (kVar)	Apparent Power (kVA)	Energy Export (MWh)	Energy Import (MWh)
2024-01-04 00:00:00	888.21	0	888.21	888.21	888.21	0.88	0	0.88	0.7	50.00	888.21	-2.87	888.21	0.0000	0.0000
2024-01-04 00:00:01	888.21	0	888.21	888.21	888.21	0.88	0	0.88	0.7	50.00	888.21	-2.87	888.21	0.0000	0.0000
2024-01-04 00:00:02	888.21	0	888.21	888.21	888.21	0.88	0	0.88	0.7	50.00	888.21	-2.87	888.21	0.0000	0.0000
2024-01-04 00:00:03	888.21	0	888.21	888.21	888.21	0.88	0	0.88	0.7	50.00	888.21	-2.87	888.21	0.0000	0.0000
2024-01-04 00:00:04	888.21	0	888.21	888.21	888.21	0.88	0	0.88	0.7	50.00	888.21	-2.87	888.21	0.0000	0.0000
2024-01-04 00:00:05	888.21	0	888.21	888.21	888.21	0.88	0	0.88	0.7	50.00	888.21	-2.87	888.21	0.0000	0.0000
2024-01-04 00:00:06	888.21	0	888.21	888.21	888.21	0.88	0	0.88	0.7	50.00	888.21	-2.87	888.21	0.0000	0.0000
2024-01-04 00:00:07	888.21	0	888.21	888.21	888.21	0.88	0	0.88	0.7	50.00	888.21	-2.87	888.21	0.0000	0.0000
2024-01-04 00:00:08	888.21	0	888.21	888.21	888.21	0.88	0	0.88	0.7	50.00	888.21	-2.87	888.21	0.0000	0.0000
2024-01-04 00:00:09	888.21	0	888.21	888.21	888.21	0.88	0	0.88	0.7	50.00	888.21	-2.87	888.21	0.0000	0.0000
2024-01-04 00:00:10	888.21	0	888.21	888.21	888.21	0.88	0	0.88	0.7	50.00	888.21	-2.87	888.21	0.0000	0.0000
2024-01-04 00:00:11	888.21	0	888.21	888.21	888.21	0.88	0	0.88	0.7	50.00	888.21	-2.87	888.21	0.0000	0.0000
2024-01-04 00:00:12	888.21	0	888.21	888.21	888.21	0.88	0	0.88	0.7	50.00	888.21	-2.87	888.21	0.0000	0.0000
2024-01-04 00:00:13	888.21	0	888.21	888.21	888.21	0.88	0	0.88	0.7	50.00	888.21	-2.87	888.21	0.0000	0.0000

SOLAR PLANT MONITORING SOFTWARE

REPORT VIEW



OUR OFFERING

Digital Reach provides complete IoT gateway / controllers from data acquisition, transmission (3G/LTE/Wifi) and computing in order to help our customers use intelligent systems using our extensive resources. Customers can focus on their smart applications with minimal system integration effort. Our solution offerings & services are fully compatible with most of the applications and provide all the components customers need for building an intelligent system.

SOLAR PLANT MONITORING SOFTWARE

FEATURES

- Advanced detection of abnormal conditions
- Provides 24/7 access to current operational data, trends, alarm history and messaging from a central location or remotely
- Flexible, scalable architecture by using IoT gateway
- Easily installed on new or legacy transformers from any manufacturer.
- Automatic morning wake-up and nightly shutdown
- Mains (Grid) over-under voltage and frequency protection
- Included authentic tracking of the solar array's maximum power operation voltage (MPPT).
- Array ground fault detection.
- Automatic fault conditions reset for all parameters like voltage, frequency and/or black out.
- Individual Array monitoring
- Measurement and/or recording of energy parameters.
- energy meter to record the energy data on a predetermined interval basis.
- Measurement & continuous acquisition of ambient air temperature, solar radiation, PV module temperature, individual string current, inverter output voltage and current, output frequency
- Operating state monitoring and failure indication.
- Representation of monitored data's in graphics mode or in tabulation mode. Controlling & monitoring the entire power system through remote a local terminal.

KEY BENEFITS

Operations management:

The performance management (either onsite or remote) of the solar PV power plant to enable the monitoring of inverters or strings at the combiner box level.

Alarm management:

Flagging any element of the power plant that falls outside pre-determined performance bands. Failure or error messages can be automatically generated and sent to the power plant service team via email or text message.

REPORTING

- The generation of yield reports detailing individual component performance, and benchmarking the reports against those of other components or locations.
- Energy from PV. Measured using an accumulative DC energy meter. If the charge controller displays incoming energy from PV
- Energy to AC load. Measured using an accumulative AC energy meter. If the inverter is displaying energy going to AC load, this value can possibly be used.
- Energy to DC load. Measured using an accumulative DC energy meter. If the charge controller displays energy going to DC load, this value can possibly be used.

ABOUT US

Digital Reach enables the IoT devices to interconnect the embedded systems to the internet. The IoT devices are fully programmable as per customer requirements and it can be deployed in nearly all the areas like Manufacturing, Energy & Utility, Health Care, Home Automation, Retail etc. With our expertise in embedded hardware development, embedded software development, system integration, and project execution, we bring in our experience, commitment and team work to exceed our customer expectation in every customer engagement.

DIGITAL REACH PVT. LTD.

502, Venus Atlantis, Prahlad Nagar, Ahmedabad 380015, India

Mobile : +91 9898062209 | Email : info@digireach.com | www.digireach.com

